Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-28 (canceled)

29. (Currently Amended) A method for determining one or more kinetic parameters of binding between a first binding member and a second binding member comprising:

simultaneously adsorbing the first binding member to a surface at a plurality of microspots, the adsorbing comprising

activating the surface of at least one microspot by presenting thereto a chemical activating substance, the activating comprising

forming a first channel around a region containing the at least one microspot,

introducing a solution containing the activating substance into the channel, and

removing excess activating solution from the channel,

adsorbing the first binding member to the at least one microspot, and

deactivating the at least one microspot;

simultaneously presenting the second binding member <u>at a plurality of concentrations</u> to the first binding member at ~~each of~~ the <u>plurality of</u> microspots, there

being a plurality of combinations of first binding member surface density and second binding member concentrations among the plurality of microspots;

simultaneously obtaining one or more kinetic parameters indicative of a binding reaction between the first and second binding members at each of the plurality of microspots to produce a kinetic analysis of the binding, the binding being detected by a biosensor detection method;

simultaneously obtaining reference data from a plurality of interspots, each of the interspots ~~microspots~~ located at a surface between at least two or more the microspots; and

processing the binding kinetic parameters and the reference data ~~date~~ to obtain one or more kinetic parameters characteristic of the binding between the first and second binding members,

wherein the plurality of bindings carried out does not require a regeneration step.

30. (Previously Presented) The method according to claim 29, wherein the biosensor detection method is selected from the group consisting of surface plasmon resonance (SPR), critical angle refractometry, total internal fluorescence (TIRF), total internal reflection phosphorescence, total internal reflection light scattering, evanescent wave elipsometry and Brewster angle reflectometry.

31. (Previously Presented) The method according to claim 29, wherein the detection method is SPR and the data indicative of a binding reaction between the first and second binding members at each of the plurality of microspots is an SPR parameter selected from the group consisting of SPR resonance angle, resonance wavelength, reflectance changes and phase changes.

32. (Previously Presented) The method according to claim 29, wherein the one or more kinetic parameters are selected from the group consisting of an association constant K_a, a dissociation constant K_d and an affinity constant.

33. (Previously Presented) The method according to claim 29, wherein the step of adsorption to the microspot involves

forming a channel around a region containing the microspot,

introducing a solution containing the molecular species into the channel, and

removing excess solution from the channel.

34. (Previously Presented) The method according to claim 29, wherein the step of activating the surface of the microspot comprises producing an electric field over the microspot.

35. (Currently Amended) The method according to claim 29, further comprising:

[[(a)]] deactivating portions of the surface not included in a microspot;

[[(b)]] forming one or more second channels perpendicular to one or more of the first channels; and

[[(c)]] for each second channel, introducing into the second channel a second binding member.

36. (Previously Presented) The method according to claim 29 further comprising obtaining reference data from a region of the surface not included in the microspots.

37. (Previously Presented) A method for localizing a molecular species at each of two or more microspots on a surface, comprising:

activating a microspot surface by:

forming a first channel around the region containing the microspot;

introducing a solution containing an activating substance into the channel; and

removing excess activating solution from the channel;

simultaneously adsorbing a molecular species to each of the two or more microspots, the adsorbing comprising

forming at least two further channels, each being perpendicular to the first channel;

simultaneously introducing a solution containing the molecular species into the channel; and

optionally deactivating the microspot,

wherein the molecular species localized on the two or more microspots may be the same in each of the microspots or different in each of the microspots, and

wherein the molecular species may be adsorbed at identical or different surface densities to each of the microspots.

38. (Cancelled)

39. (Previously Presented) The method according to claim 37, wherein the step of activating the microspot comprises producing an electric field over the microspot.

40. (Cancelled)

41. (Previously Presented) The method according to claim 37, wherein at least one of the molecular species is a first binding member and the method further comprises

forming one or more channels in a region containing the microspots;

introducing a second binding member into each of the one or more channels; and

simultaneously obtaining data indicative of a binding reaction between the first and second binding members at each of the two or more microspots by a biosensor detection method.

42. (Previously Presented) A probe array produced by the method of claim 37.

43. (Previously Presented) The method according to claim 30, wherein the detection method is SPR and the data indicative of a binding reaction between the first and second binding members at each of the plurality of microspots is an SPR parameter selected from the group consisting of SPR resonance angle, resonance wavelength, reflectance changes and phase changes.

44. (Previously Presented) The method according to claim 30, wherein the one or more kinetic parameters are selected from the group consisting of an association constant K_a, a dissociation constant K_d and an affinity constant.

45. (Previously Presented) The method according to claim 31, wherein the one or more kinetic parameters are selected from the group consisting of an association constant K_a, a dissociation constant K_d and an affinity constant.

46. (Previously Presented) A probe array produced by the method of claim 41.